the same as *P. barbata*; but I think this is doubtful, as Lepechin described the fur as dirty-white, sometimes with a yellow tinge without any spots, and the hair as erect, with abundance of under wool. The African Seal has very short, broad, closely adpressed hair, while Lepechin expressly states that the hair of *P. leporina* is not appressed, but erect, and is at once known from *Phoca barbata* by the large size of the grinders, which are very close together, and the last one very peculiarly placed across the line of the other teeth.—J. E. GRAY.

Notes on the Development of the Actiniæ. By M. HAIME.

I have verified the separation of the sexes in the *Actiniæ*. Each capsule of the ovary contains only a single ovule, but each testicle contains several hundred thousand spermatozoa. In the species examined by me (*A. equina*, L., *effœta*, L., *sulcata*, Penn., *pedunculata*, Penn., and *coriacea*, Cuv.), these always had a bilobed head and a very long filament.

Actinia pedunculata usually has the sexes completely separated as in the other species, but, in some cases, a few spermatic capsules occur in the midst of an ovigerous gland and *vice versâ*.

The ovules are sometimes uniform in size, sometimes of different sizes, which appears to indicate that several successive layings must take place, and in fact it is not uncommon to find young animals already furnished with twenty-four or even forty-eight tentacles in the visceral cavities of females containing at the same time ovules of very small size (*A. equina* and *pedunculata*). The only difference, except size, between the smaller and larger ovules consists in the smaller proportionate size of the Purkinjian vesicle in the latter. Two or three germinal spots are often to be seen. I have observed no ova in process of segmentation.

The ciliated larva is at first spherical, and no depression or projection is to be observed on its surface; it soon elongates a little and presents a conical extremity. The other extremity becomes hollowed in the centre, forming the rudiment of the mouth. The cavity formed at this point enlarges by degrees by the removal of the internal substance, and the visceral chamber is rapidly formed. The teguments already form a distinct layer at the surface of the body, which contains thread-capsules, globules and vibratile cells almost exactly similar to those which occur in the adult. In the general cavity of some species (*A. pedunculata* for instance) there are also some large coloured globules, which vibrate and gyrate.

Before any tentacular mammillæ make their appearance, narrow bundles of muscular fibres are formed in the direction of the length of the body. These are the rudiments of the muscular system, and correspond with the vertical plates which are to divide the visceral cavity. Their initial number is normally six in *A. equina*, and probably also in all the species of the group; but I found it impossible to ascertain whether it is the same in *A. pedunculata*, or whether it is only four; it is certain, however, that it soon rises to eight in this polype, and that it afterwards becomes a multiple of six.

After the formation of these first muscular cords, the form of the young larvæ, which was hitherto oval, becomes slightly modified; the body becomes more contractile, and soon elongates and shortens itself to a great extent by expanding or contracting in the middle. From the flattened buccal extremity, and on points corresponding with the spaces between the first muscular bands, rounded tubercles, representing the first tentacles, are soon seen to spring.

The initial number of the tentacles is of course in relation with that of the first vertical muscular bands, or rather of the mesenteroid plates which are inserted upon these. But these plates are not all developed at the same time; two of them, opposite to each other, first make their appearance; these grow from above downwards and present at their margin a little knotted band (*cordon pelotonné*), before the others begin to appear. If we consider that these two mesenteroid plates correspond with the two commissures of the mouth, and that the latter is produced transversely from the commencement, before the formation of any lamellar or appendicular organ, we shall arrive at this consequence, that the polype actually presents the character of bilaterality before acquiring the radiate arrangement, and that the former of these types, whilst combining with the other, still continues very apparent for a long time. The examination of the adult Corals shows that it never completely disappears.

In proportion as the tentacles increase in size and number, transverse muscular fibres begin to surround the body, and these rings, which at first are very distant, become more and more numerous, especially towards the extremity opposite to the mouth. This extremity soon flattens and acquires an adhesive faculty. The young polype then presents the most essential characters of its parent. Hitherto it has been swimming freely in the water, turning pretty quickly upon its axis, and having its pedal extremity in front. It preserves the cilia with which the surface of its body is covered, even after it is able to attach itself, and when it possesses three circles of tentacles. At this period the young of *A. equina* present no trace of the marginal vesicles which are to correspond with these three circles on the circumference of the disc of the adult animal.

I have stated that the initial number of tentacles in *Actinia* is six, like that of the first longitudinal muscular bands. It may happen, in consequence of accidental abortions, that this number is only five, or perhaps four, or the fortuitous inequality of the first tentacles may deceive the observer as to the number of elements in this first circle; but the type is normally hexameral. The exception which I have noticed in *A. pedunculata*, apparently only affects the second circle. I have, in fact, remarked that momentary checks in the development of the different parts of the second circle were not rare, especially in *A. equina*, but it is generally completed, as well as the third, in conformity with the laws established by M. Hollard. The fourth circle, on the contrary, almost always exhibits with much distinctness the mode of evolution ascertained by M. Milne-Edwards and myself for the partitions of Corals; that is to say, the twenty-four elements of which it is to be composed, do not make their appearance all together, but the twelve which originate between the tentacles of the first and third rows are all developed before those which are to come between those of the second and third circles.—*Comptes Rendus*, Aug. 28, 1854, p. 437.

RARE IRISH MOLLUSCA.

Cork, 9th Mo. 22nd, 1854.

To the Editors of the Annals of Natural History.

GENTLEMEN,—I have the pleasure of informing you that a few weeks since I found at Ballycotton, in the east of this county, alive and in good condition, and imbedded in turf, which reached to low-water mark, *Pholas crispata, dactylus* and *candida* (the last very abundantly), and to my great pleasure, several specimens of *P. papyracea*, now for the first time obtained in this county, and except one specimen found near Dungarvan by Dr. Farren, new to Ireland.

Yours truly,
SAMUEL WRIGHT.

TYPICAL COLLECTIONS OF MOLLUSCA.

The British Museum has lately received the following collections of typical specimens:—

1. The Land Shells of Jamaica, described by the late Professor Adams and the Hon. Edward Chitty. Presented by the Hon. Edward Chitty.
2. The Shells and Mollusca described, figured, or mentioned by the late M. Souleyet in his account of the 'Voyage of the Bonite,' and in the Monograph of Pteropods, by MM. Rang and Souleyet.
3. The Shells described and mostly figured in M. d'Orbigny's 'Voyage to South America.'
4. The Mollusca described and figured by M. d'Orbigny in M. Ramon de Sagra's 'Natural History of Cuba and the West Indies.'
5. The terrestrial and marine Shells described by M. d'Orbigny in Webb and Berthelot's 'Natural History of the Canaries.'

On a new species of Suthora *from China.* By G. R. GRAY, F.L.S., F.Z.S., &c.

SUTHORA WEBBIANA.

Crown of the head and back of the neck sandy red, passing into the olive tint of the back and upper surface generally; tail of the same colour, but of a shade darker than the back; primaries strongly edged with bright rufous; throat and breast light buff, washed with a rosy tint; abdomen inclined to olive; bill light brown, washed with rosy pink; legs either yellow or fleshy white.

Hab. China (Shang Hai).

A single specimen, collected by Mr. Webb, was presented by that gentleman to the British Museum. It is much larger than *S. nipalensis* and *fulvifrons*.—*Zool. Proc.* March 9, 1852.